

CLAIMS

Claims 1-32 (Cancelled)

33. (Currently amended) An endodontic dental reinforcement post comprising a ~~tooth force vectoring~~ bundle of non-metallic and non-woven fiberglass fibers in a cured resin, forming a reinforced plastic composite, said post being flexible, prefabricated, and adapted to extend from an apical end to a coronal end of a tooth canal, ~~wherein said force vectoring comprises dissipation of energy by shifting of stress under excessive tooth force loads, for saving a force overloaded tooth and further~~ wherein said post has having a flexibility approximating the flexibility of a natural tooth structure; ~~and wherein~~ said post has having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure,

said post relieving stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.

34. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said post is translucent.

35. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said reinforced plastic comprises E-glass fibers.

36. (Cancelled)

37. (Cancelled)

38. (Previously Presented) The dental reinforcement post as in Claim 33 further comprising an epoxy resin.

39. (Previously Presented) The dental reinforcement post as in Claim 38 wherein said epoxy resin further comprises an opaquer composition.

40. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said post has a rounded bottom end.

41. (Cancelled)

42. (Previously Presented) The dental reinforcement post as in Claim 33 further comprising at least one surface cut of about 50-100 micron depth to increase texturing.

43. (Cancelled)

44. (Previously Presented) The dental reinforcement post as in Claim 33 further comprising at least one groove of about 50 to 100 micron depth to increase texturing.

45. (Previously Presented) The dental reinforcement post as in Claim 33 further comprising at least one indentation of about 50 to 100 micron depth to increase texturing.

46. (Previously Presented) The dental reinforcement post as in Claim 42 further comprising at least one axially extending die drawn indentation of 50 to 100 micron depth to increase texturing.

Claims 47-49 (Cancelled)

50. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said post is a dental reconstructive pin.

51. (Cancelled)

52. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said post is polished at one end to direct light axially therethrough.
53. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said reinforced plastic composite comprises a plurality of adjacent coaxially extending dental reinforcement fibers.
54. (Previously Presented) The dental reinforcement post as in Claim 53 wherein said post includes at least one axially extending facet for locking said post in position within an interior canal of a tooth.
55. (Currently amended) A dental post and core device comprising a prefabricated, inelastic, flexible, ~~tooth force vectoring~~ post, said post having a coronal end and an apical end, said post comprising a bundle of non-metallic and non-woven fiberglass fibers in a cured resin, forming a reinforced plastic composite, said fibers extending between the coronal and the apical end of said post, ~~wherein said force vectoring comprises dissipation of energy by shifting of stress under excessive tooth force loads, for saving a force overloaded tooth and further wherein said post has~~ having a flexibility approximating the flexibility of a natural tooth; ~~and wherein said post has~~ having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure, said post relieving stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.
56. (cancelled)
57. (cancelled)
58. (Previously Presented) The endodontic dental reinforcement post as in Claim 33 wherein said post is cylindrical.

59. (Previously Presented) The dental post as in Claim 33 wherein said post is tapered.

60. (Previously Presented) The dental post and core device as in Claim 55 wherein said post is cylindrical.

61. (Previously Presented) The dental post and core device as in Claim 55 wherein said post is tapered.

62. (Cancelled)

63. (Cancelled)

64. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said post comprises a plurality of circumferential serrations.

65. (Previously Presented) The dental post and core device as in Claim 55 wherein said post comprises a plurality of circumferential serrations.

Claims 66-69 (Cancelled)

70. (Previously Presented) The dental reinforcement post as in Claim 38 wherein said epoxy resin comprises bisGma.

71. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said bundle of fibers comprises S-glass.

72. (Previously Presented) The dental reinforcement post as in Claim 39 wherein said opaquer composition is a radio-opaque composition.

73. (Previously Presented) The dental reinforcement post as in Claim 72 wherein said radio-opaque composition is barium sulfate.

74. (Previously Presented) The dental post and core device as in Claim 55, wherein said reinforced plastic composite comprises S-glass fibers.

75. (Previously Presented) The dental post as in Claim 55, wherein said reinforced plastic composite comprises a twisted bundle of fibers.

76. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said reinforced plastic composite comprises a twisted bundle of fibers.

77. (Currently amended) An endodontic dental reinforcement ~~tooth-force-vectoring~~ post of endodontic and reconstructive pin therapy comprising a fiberglass reinforced plastic composite consisting essentially of a bundle of fiberglass fibers, wherein said post is flexible, prefabricated, and adapted to extend from an apical end to a coronal end of a tooth canal ~~wherein said force vectoring comprises dissipation of energy by shifting of stress under excessive tooth force loads, for saving a force overloaded tooth and further wherein~~ said post has having a flexibility approximating the flexibility of a natural tooth structure; said post has having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure,

said post relieving stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.

78. (Currently amended) A prefabricated ~~tooth-force-vectoring~~ dental post consisting essentially of bundles of fiberglass reinforced plastic fibers in a cured resin composite, wherein said bundles of fibers are twisted, and wherein said post is prefabricated such that said post is ready for insertion into the root canal ~~wherein said force vectoring comprises dissipation of energy by shifting of stress under excessive tooth force loads, for saving a force overloaded tooth and further wherein~~ said post has having a flexibility

approximating the flexibility of a natural tooth; ~~and wherein said post has~~ having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure, said post relieving stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.

79. (cancelled)

80. (Previously Presented) The dental post of Claim 78, wherein said bundles of fiberglass reinforced plastic fibers comprise at least one non-axially aligned fiber.

81. (Previously Presented) The dental post of Claim 78, wherein said bundles of fiberglass reinforced plastic fibers are equally dispersed throughout the post.

82. (Previously Presented) The dental post of Claim 78, wherein said resin comprises a filler.

83. (Previously Presented) The dental post of Claim 82, wherein said filler is radio-opaque.

84. (Previously Presented) The dental post of Claim 78, wherein said resin comprises an epoxy resin.

85. (Previously Presented) The dental post of Claim 85, wherein said epoxy resin is bisGma.

86. (Previously Presented) The dental post of Claim 78, wherein said resin comprises an opaquer composition.

87. (Previously Presented) The dental post of Claim 86, wherein the opaquer composition is barium sulfate.

88. (Previously Presented) The dental post of Claim 78, wherein said post is generally cylindrical.

89. (Previously Presented) The dental post of Claim 78, wherein said post comprises a plurality of circumferential serrations.

90. (Previously Presented) The dental post of Claim 78, wherein said post is translucent.

91. (Previously Presented) The dental post of Claim 78, wherein said post has a diameter of between 0.36 to .70 inches.

92. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said fiberglass reinforced plastic composite comprises S-glass fibers.

93. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said post has a modulus of elasticity less than or equal to that of tooth dentin.

94. (Previously Presented) The dental post and core device as in Claim 55 wherein said inelastic post has a modulus of elasticity less than or equal to that of tooth dentin.

95. (Previously Presented) The endodontic dental reinforcement post of Claim 77 wherein said post has a modulus of elasticity less than or equal to that of tooth dentin.

96. (Previously Presented) The dental post of Claim 78 wherein said post has a modulus of elasticity less than or equal to that of tooth dentin.

97. (Previously Presented) The dental reinforcement post as in Claim 33 wherein said bundle of non-metallic and non-woven fiberglass fibers are loosely compacted and cured in said resin.

98. (Previously Presented) The dental post and core device as in Claim 55 wherein said bundle of non-metallic and non-woven fiberglass fibers are loosely compacted and cured in said resin.

99. (Previously Presented) The endodontic dental reinforcement post of Claim 77 wherein said bundle of fiberglass fibers are loosely compacted and cured in a resin.

100. (Previously Presented) The dental post of Claim 78 wherein said bundle of fibers are loosely compacted and cured in a resin.

101. (Currently amended) A prefabricated ~~tooth force vectoring~~ endodontic dental reinforcement post adapted to extend in a tooth canal from between at least a coronal end of the tooth cavity into the tooth canal and at most to an apical end of a tooth canal, said reinforcement post comprising:

a bundle of non-metallic, non-woven fiberglass fibers;

a cured resin, at least a central portion and a lower portion of said bundle of non-metallic, non-woven fiberglass fibers being in said cured resin and forming a reinforced composite plastic prefabricated post adapted to be positionable in the tooth canal, said portion of said bundle extending between at least said coronal end of the tooth canal into the tooth canal toward said apical end of the tooth canal; and

a post axis adapted to extend along the tooth canal, said bundle of non-metallic, non-woven fiberglass fibers being twisted with respect to said post axis ~~wherein said force vectoring comprises dissipation of energy by shifting of stress under excessive tooth force loads, for saving a force overloaded tooth and further wherein said post has having~~ a flexibility approximating the flexibility of a natural tooth structure; ~~and wherein said post has having~~ a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure; and

said post relieving stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.



102. (Previously Presented) The prefabricated endodontic dental reinforcement of Claim 101 wherein said bundle includes an upper portion adapted to be positionable above said coronal end of said tooth canal.

103. (Previously Presented) The prefabricated endodontic dental reinforcement of Claim 102 wherein said upper portion of said bundle may be selectably flared.

104. (Previously Presented) The prefabricated endodontic dental reinforcement of Claim 102 further including a core spacer positionable on said bundle at said central portion of said bundle at said coronal end of said tooth canal.

105. (new) A dental post and core device comprising a prefabricated, inelastic, flexible, post, said post having a coronal end and an apical end, said post comprising a bundle of non-metallic and non-woven medical grade optical fibers in a cured resin, forming a reinforced plastic composite, said fibers extending between the coronal and the apical end of said post, said post having a flexibility approximating the flexibility of a natural tooth structure; said post having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure, and

said post reducing stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.

106 (new) An endodontic dental reinforcement post of endodontic and reconstructive pin therapy comprising a fiberglass reinforced plastic composite consisting essentially of a bundle of medical grade optical fibers, wherein said post is flexible, prefabricated, and adapted to extend from an apical end to a coronal end of a tooth canal said post having a flexibility approximating the flexibility of a natural tooth structure; said post having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure,

said post reducing stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.

107. (new) A prefabricated dental post consisting essentially of bundles of reinforced medical grade optical fibers in a cured resin composite, wherein said bundles of fibers are twisted, and wherein said post is prefabricated such that said post is ready for insertion into the root canal said post having a flexibility approximating the flexibility of a natural tooth structure; said post having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure,

said post reducing stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.

108. (new ) A prefabricated endodontic dental reinforcement post adapted to extend in a tooth canal from between at least a coronal end of the tooth cavity into the tooth canal and at most to an apical end of a tooth canal, said reinforcement post comprising:

a bundle of non-metallic, non-woven medical grade optical fibers;

a cured resin, at least a central portion and a lower portion of said bundle of non-metallic, non-woven medical grade optical fibers being in said cured resin and forming a reinforced composite plastic prefabricated post adapted to be positionable in the tooth canal, said portion of said bundle extending between at least said coronal end of the tooth canal into the tooth canal toward said apical end of the tooth canal; and

a post axis adapted to extend along the tooth canal, said bundle of non-metallic, non-woven medical grade optical fibers being twisted with respect to said post axis said post having a flexibility approximating the flexibility of a natural tooth structure; said post having a modulus of elasticity approximating the modulus of elasticity of a natural tooth structure;

said post reducing stress concentrations within the tooth structure by shifting of stress concentrations away from an apical end of the tooth under excessive tooth force loads to a coronal end of the tooth.